STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

Office of Preparedness & Response
Sherry Adams, R.N., C.P.M, Director
Isaac P. Ajit, M.D., M.P.H., Deputy Director

April 9, 2010

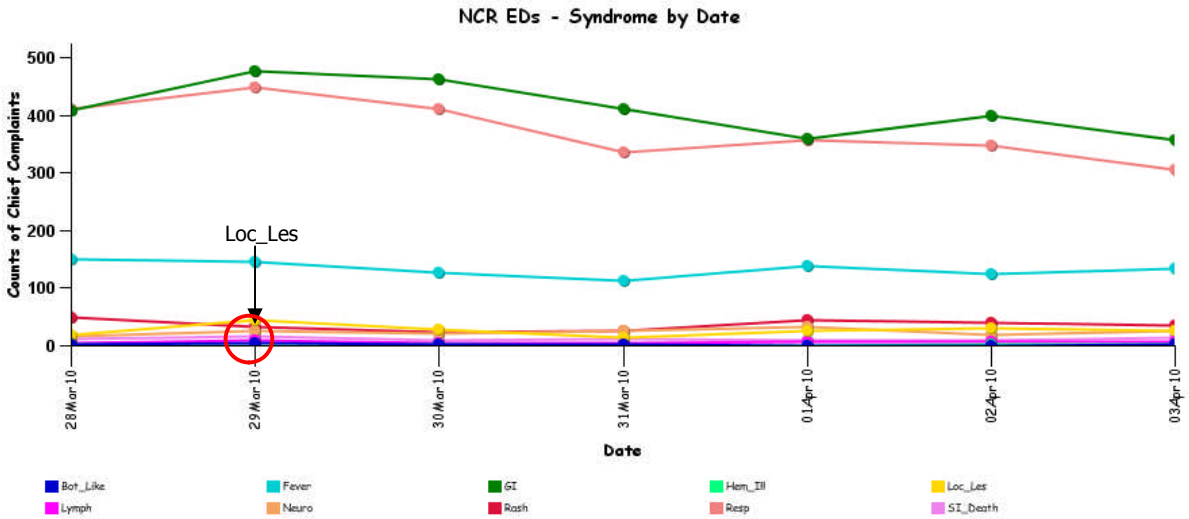
Public Health & Emergency Preparedness Bulletin: # 2010:13
Reporting for the week ending 04/03/10 (MMWR Week #13)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

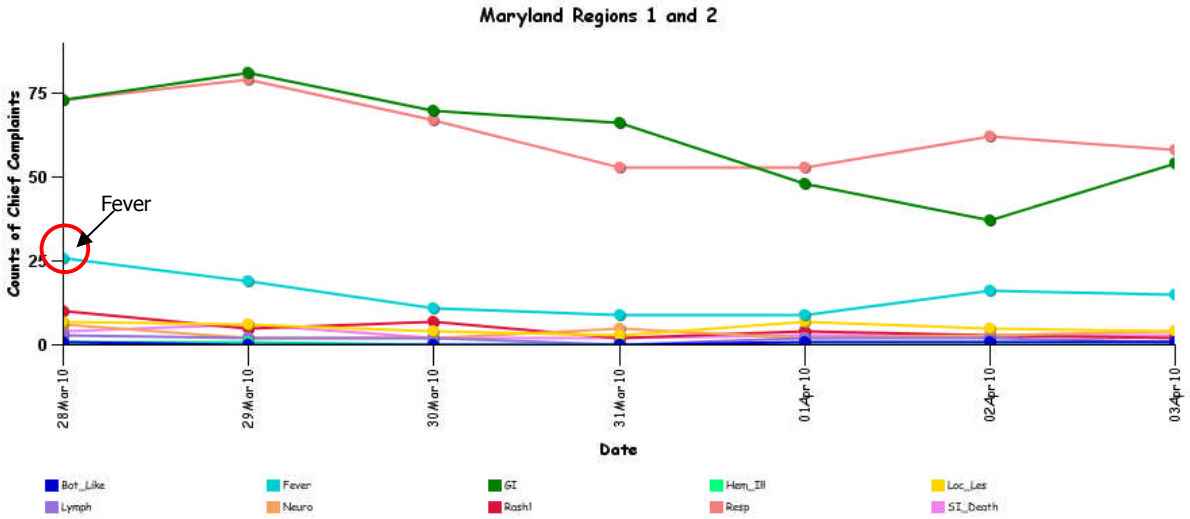
SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled.
Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

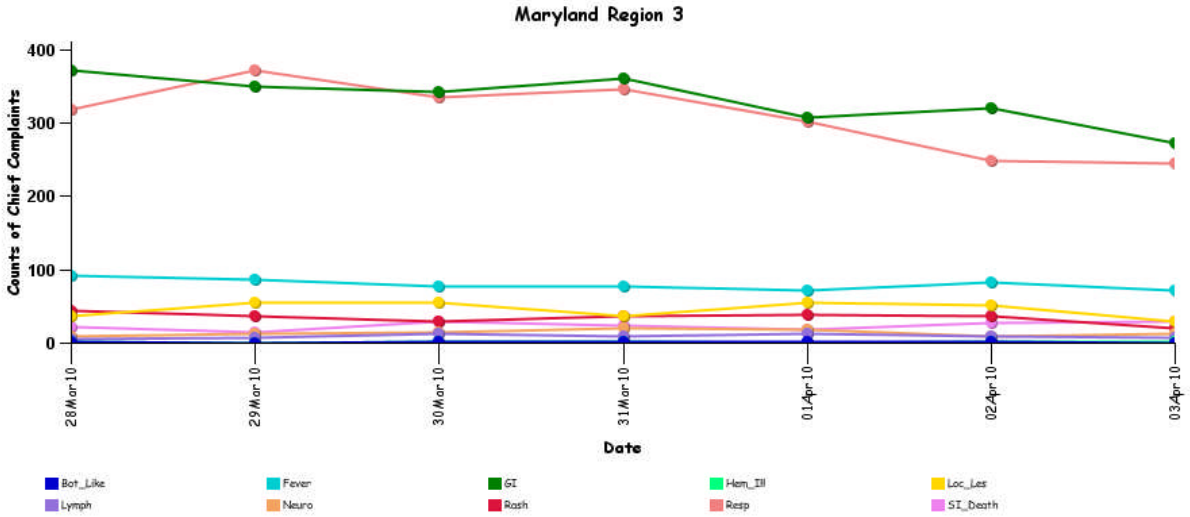


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

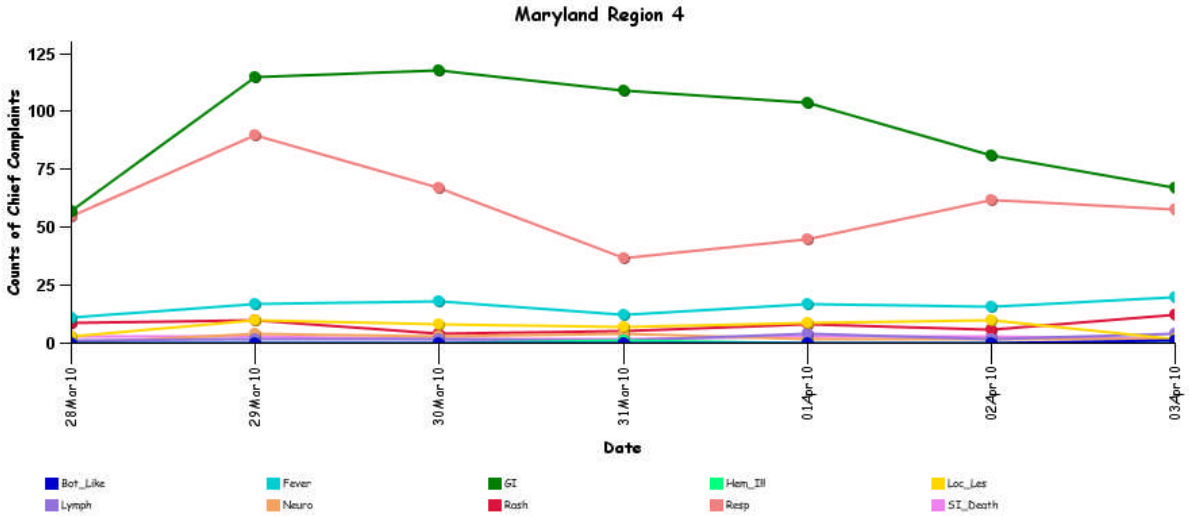
MARYLAND ESSENCE:



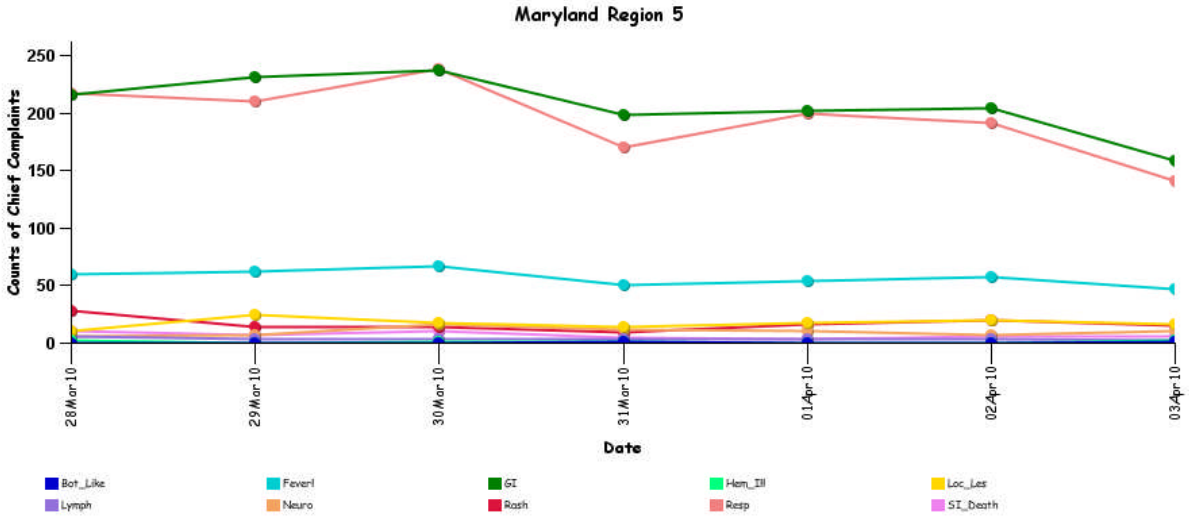
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE

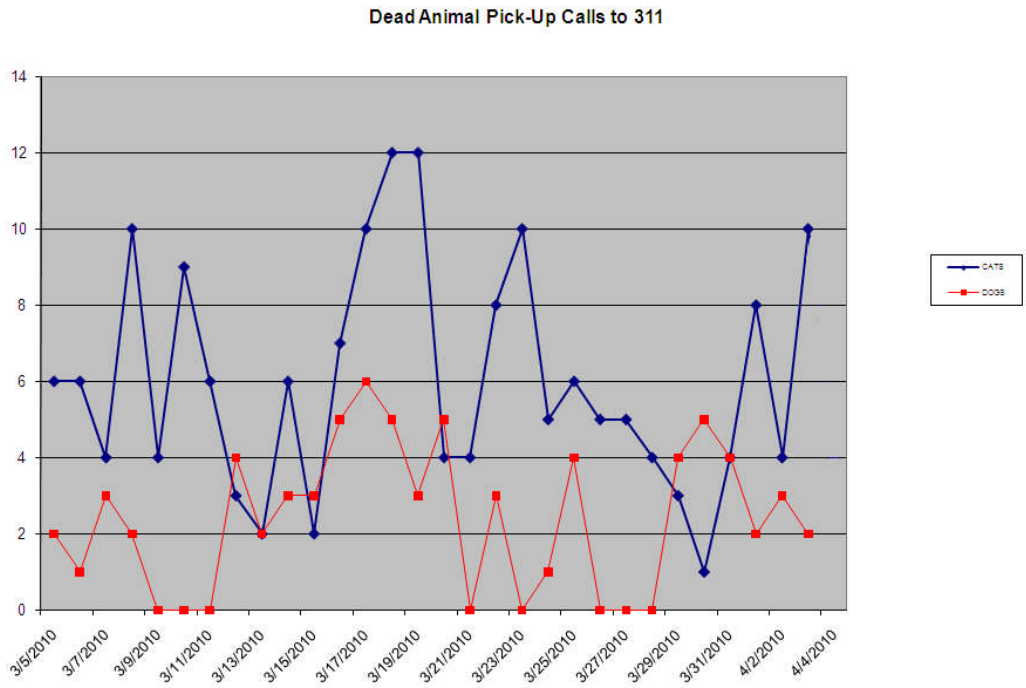


* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



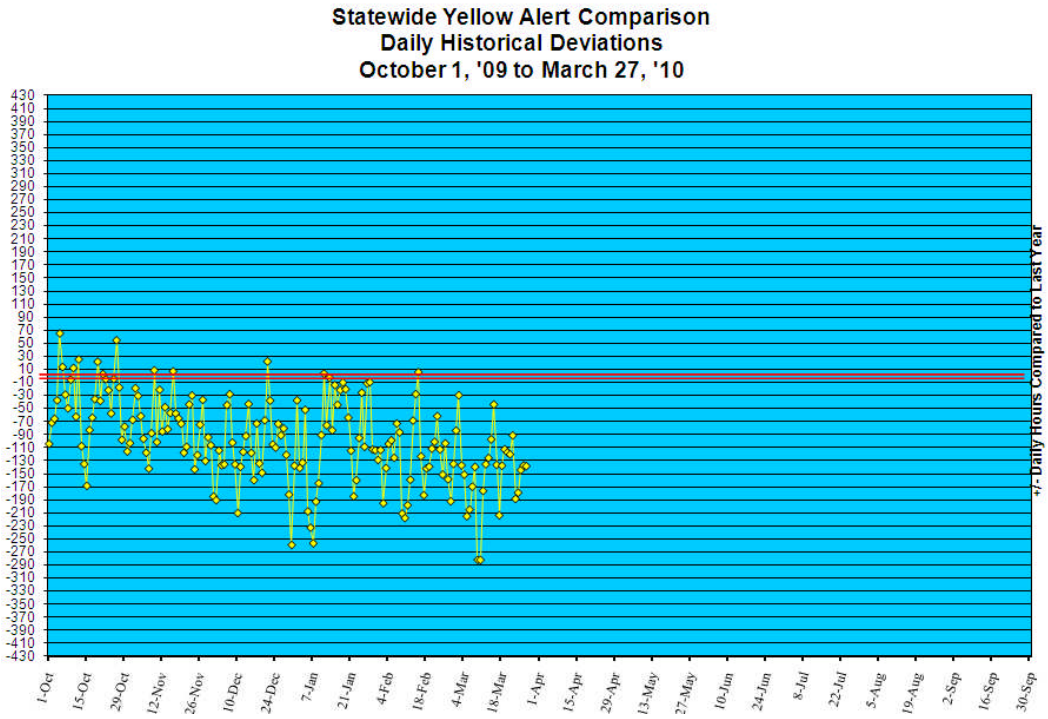
* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in February 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (March 28- April 3, 2010):	13	0
Prior week (March 21- March 27, 2010):	10	0
Week#13, 2009 (March 29- April 4, 2009):	17	0

3 outbreaks were reported to DHMH during MMWR Week 13 (March 28-April 3, 2010)

1 Gastroenteritis outbreak
1 outbreak of GASTROENTERITIS in an Assisted Living Facility

1 Foodborne outbreak
1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Restaurant

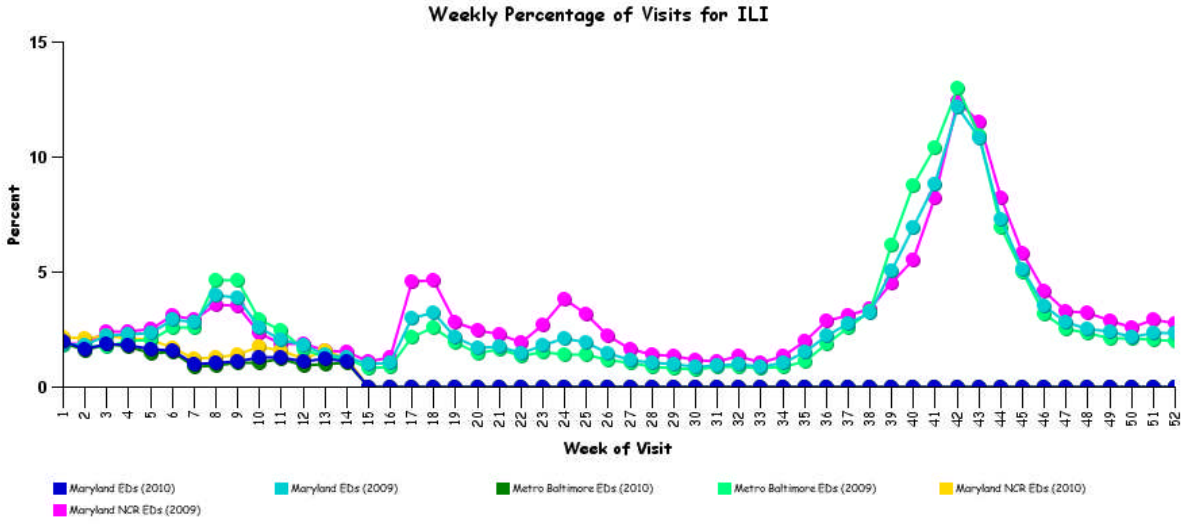
1 Rash illness outbreak
1 outbreak of CHICKENPOX in a School

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 13 is SPORADIC.

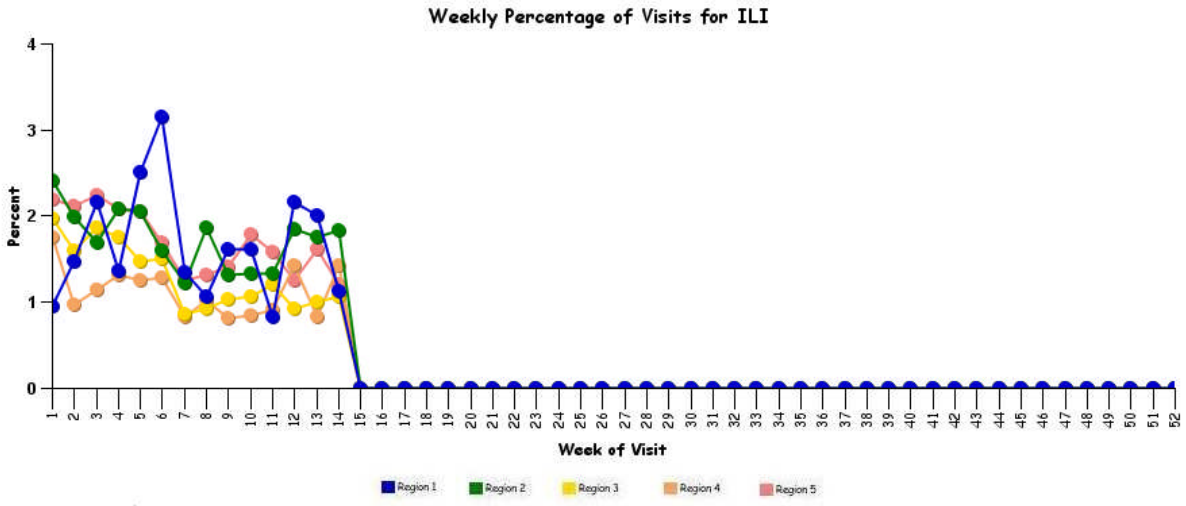
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the
week.



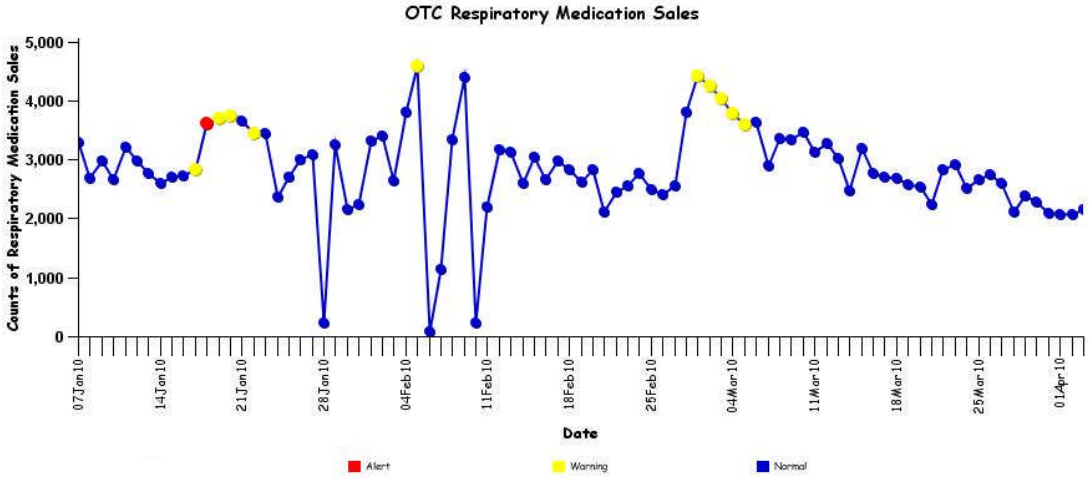
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://preparedness.dhmh.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Version7.2).pdf

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of March 30, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 492, of which 291 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

AVIAN INFLUENZA (EGYPT): 31 March 2010The Ministry of Health of Egypt has announced 2 new human cases of A (H5N1) avian influenza infection. The 1st case was announced on Sun 28 Mar 2010 and is a 30 year-old female from Damietta district, Damietta Governorate. The case was admitted to hospital on Wed 24 Mar 2010 where she received oseltamivir treatment. She is in a critical condition. [This case ranks as the 18th case in Egypt in 2010 (108th overall). The 2nd case was announced on Sun 21 Mar 2010 [athe week before] and is a 4 year-old male from Beba district, Beni Suaif Governorate. The case was admitted to hospital on Thu 18 Mar 2010 where he received oseltamivir treatment. He died on Wed 24 Mar 2010. The child died and became the 6th fatality in Egypt in 2010 and 33rd overall since 2006. Investigations into the source of infection indicated that both cases had exposure to sick and dead poultry. The cases were confirmed by the Egyptian Central Public Health Laboratories, a National Influenza Center of the WHO Global Influenza Surveillance Network (GISN). Of the 108 laboratory confirmed cases of avian influenza A (H5N1) reported in Egypt, 33 have been fatal.

AVIAN INFLUENZA (NEPAL): 31 March 2010, In Nepal, 2 new outbreaks of H5N1 highly pathogenic avian influenza (HPAI) have been reported. The veterinary authority sent 'follow up report no. 2' dated 28 Mar [2010] to the World Organisation for Animal Health (OIE). It reports 2 new cases of HPAI. One of these was in a mixed village flock of 123 backyard chickens, ducks, and pigeons in Tikapur municipality in the region of Seti. Starting on 2 Mar [2010], 40 of the birds died and the remaining birds were destroyed. The 2nd outbreak started 6 days later, on 8 Mar [2010], at Deurali VDC ward No 6 in the Lumbini region. In a similar mixed flock of 4767 birds, 216 died and the rest were destroyed. The presence of the H5N1 sub-type of the virus has been confirmed.

AVIAN INFLUENZA (VEIT NAM): 28 March 2010, A total of 5 new outbreaks of highly pathogenic avian influenza (HPAI) have been reported. The veterinary authority has sent Follow Up Report No. 41 dated 24 Mar 2010 to the World Organisation for Animal Health (OIE). The report covers 5 outbreaks starting between 28 Feb and 15 Mar 2010. They occurred in the north and in the south of the country; 3 were on farms and 2 were in village flocks. In total, 5208 were involved, of which 2442 died and 2766 were destroyed.

AVIAN INFLUENZA (ROMANIA): 28 March 2010, A suspected bird flu outbreak has been reported in a remote Romanian village, the Sanitary and Veterinary Authority said on Saturday [27 Mar 2010]. Samples of 2 dead hens were sent for confirmation of the potentially deadly H5N1 virus to the Animal Health Institute in Bucharest and on to the Weybridge laboratory in Britain, the Authority said. The poultry in the small private farm at a village on the Danube Delta were slaughtered and the area disinfected. "There is currently no risk of the disease spreading," the Authority said. A bird flu outbreak was reported 2 weeks ago in the nearby village of Letea close to the Ukrainian border, the 1st case in Europe for a year. The previous case in the European Union had been confirmed in March 2009 in a wild duck shot during a hunt near Starnberg, in Bavaria, southern Germany. Romania was hit by massive bird flu outbreaks in 2005 and 2006, when more than a million poultry were slaughtered. Avian influenza or "bird flu" is a highly contagious viral disease which primarily affects birds, but on rare occasions can also be contracted by humans and other mammals. On Wednesday [24 Mar 2010], the World Health Organisation said the H5N1 virus remains a threat to humans, after bird flu outbreaks killed 7 people in several countries since the beginning of the year.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1) (USA-GEORGIA): 30 March 2010, Georgia is seeing a spike in swine flu [influenza pandemic (H1N1) virus infection] hospitalizations, having the most in the country for 3 weeks in a row, federal health officials said Monday [29 Mar 2010]. It is too early to say whether Georgia or the country is seeing another wave of the illness, which had diminished across the nation for several months, the officials said. But the number of people being hospitalized in Georgia equals the number of pandemic (H1N1) hospitalizations when the disease peaked here last September [2009]. Officials stressed that no other state is seeing such an increase. In the 1st 2 weeks of March [2010], Georgia had 80 and 72 hospitalizations respectively, according to the

state Department of Community Health. In contrast, the 1st week of February 2010 saw 17 hospitalizations. The Atlanta-based Centers for Disease Control and Prevention [CDC] was so concerned about the Georgia situation that it sent a team of researchers to investigate. CDC officials held a news conference Monday [29 Mar 2010] that focused on the Georgia problem. Georgia's increase is reflected to some degree in other southeastern states but not in other parts of the country, she said. She described the illness as "circulating intensely" here. Georgia has one of the lowest immunization rates for pandemic (H1N1) influenza, Schuchat said. State officials point out that the state's immunization rate for children, however, is above average for the country. "Most of the hospitalizations that we've seen have occurred in ... adults with underlying conditions that put them at higher risks of severe influenza," Schuchat said. Underlying conditions include diabetes and heart disease. The state health departments, as well as county health departments, have been boosting their efforts to get people vaccinated; stressing that there is still an abundance of free vaccine. Last month [February 2010], the Atlanta Journal-Constitution reported that Georgia had more than 2.5 million doses of swine flu vaccine left. Less than 1/3rd of Georgia's total allocation of 3.5 million doses -- 978 092 doses -- had been administered, according to the state. The problem has been one of timing. Essentially, by the time the vaccine was widely available, the flu -- and public interest -- had peaked. Neither Georgia nor the nation is seeing a significant increase in swine flu-related deaths, and there is no indication the virus has mutated into a more dangerous form, officials said Pandemic (H1N1) influenza first appeared last April [2009] and has hospitalized 1012 Georgians and killed 60.

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

BRUCELLOSIS, CERVID (GREATER YELLOWSTONE ECOSYSTEM): 1 April 2010, US Geological Survey scientists say brucellosis, a bacterial infection of cattle, elk, and bison, appears to be increasing in northwestern Wyoming elk herds. "Elk-to-elk transmission of this disease may be increasing in new regions of the Greater Yellowstone Ecosystem [GYE], which remains the last reservoir for brucellosis in the United States," said Paul Cross, a USGS disease ecologist and lead author of the study. He said infected animals often abort pregnancies, and the presence of the disease within livestock results in additional testing requirements and trade restrictions. Officials said several cattle herds have been infected in Wyoming, Idaho, and Montana since 2004 and recent cases of brucellosis cattle are thought to have spread from elk due to the lack of contact between bison and cattle. "We looked at a number of hypotheses for why we may be observing these increases in brucellosis," Cross said. "2 seemed the most probable: either brucellosis transmission among elk is becoming more frequent as elk densities increase, or the diagnostic tests are cross-reacting with another pathogen that is increasing in prevalence." (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

ANTHRAX, WILDLIFE (NAMIBIA): 02 April 2010, We've found 90 dead plains zebra (_Equus quagga_) in the 2 months since 1 Feb 2010 (when things started picking up). Of 46 tested thus far, 29 were confirmed positive for _Bacillus anthracis_ by selective culture at the Central Veterinary Laboratory (CVL) in Windhoek. Of the 17 that tested negative, 8 were suspected to have died of anthrax based on carcass freshness, lack of coagulation, and lack of any sign of predation. We have also found 18 springbok (_Antidorcas marsupialis_) carcasses since 1 Feb 2010, of which 6 have been tested and of those 4 were confirmed positive via selective culture. For comparison, in all of last year [2009] we found 100 zebra carcasses of which 58 were confirmed anthrax via culture (at CVL) and subsequent PCR (by a collaborator at the University of Hohenheim). We considered last year to be a very big year for anthrax in Etosha. This year [2010] is even more exceptional. In Etosha, where anthrax is seasonally endemic, zebra have always constituted the majority of reported carcasses testing positive for anthrax. Carcass incidence tends to peak at the end of the rainy season (March-April) in zebra, while elephant outbreaks occur during the dry season. So far this year [2010] the carcass count for zebra is unusually high. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

EBOLA HEMORRHAGIC FEVER (CONGO): 30 March 2010, 6 suspected cases of hemorrhagic fever have been recorded between 2 and 14 Mar 2010 in the Kitule Health Zone, which lies 135 km south of Buta in Orientale province in the north-east of the Democratic Republic of the Congo (DRC). According to Bienvenue Apatala, a physician in the Kitule Health Zone who confirmed this information on Thursday [25 Mar 2010], 3 of the 6 victims have died, and the other 3 patients are in a nearby hospital. The virus responsible for this outbreak has not yet been identified. However, all 6 patients exhibited similar signs: high fever, extreme fatigue, and vomiting with discharge of blood. Blood samples from the patients have been sent to Kinshasa for appropriate laboratory analysis. This outbreak of disease with symptoms reminiscent of Ebola hemorrhagic fever has created panic in the local population. Ebola hemorrhagic fever virus infection is usually accompanied by a rapid rise in temperature, extreme weakness, myalgia, headache and difficulty in swallowing. Fever is succeeded by vomiting, renal insufficiency, hepatitis and hemorrhage. The disease is transmitted by contact with blood and other secretions. There is no specific vaccine for protection against Ebola hemorrhagic fever. Outbreaks of Ebola hemorrhagic fever were recorded in Orientale province in 1999 and 2000. It had occurred previously in Equateur province during 1976 and in 1977, at Bandunduin in 1995 and in Kasai-Occidental in 2007 and 2008. (Viral Hemorrhagic Fever is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

Interim Results: State-Specific Influenza A (H1N1) 2009 Monovalent Vaccination Coverage --- United States, October 2009--January 2010. *MMWR Weekly,* April 2, 2010 / 59(12);363-368: In July 2009, the Advisory Committee on Immunization Practices (ACIP) issued recommendations for the use of influenza A (H1N1) 2009 monovalent vaccine (*1*). Distribution of 2009 H1N1 vaccine in the United States began on October 5, using a system that allocated available vaccine to states proportional to their populations. By the end of 2009, approximately 61 million persons had been vaccinated (*2*). By January 29, 2010, approximately 124 million doses had been distributed. To provide preliminary state-specific estimates of 2009 H1N1 vaccination coverage as of the end of January, CDC analyzed results from the Behavioral Risk Factor Surveillance System (BRFSS) and the National 2009 H1N1 Flu Survey (NHFS), using data collected during November 2009--February 2010. This report summarizes the results of that analysis, which found that, by state, estimated 2009 H1N1 vaccination coverage as of the end of January among persons aged ≥6 months ranged from 12.9% to 38.8% (median: 23.9%). Median coverage was 36.8% for children aged 6 months--17 years, 20.1% for adults aged ≥18 years, and 33.2% for persons in the ACIP initial target group.* The wide variation in 2009 H1N1 vaccination rates among states suggests opportunities for improvement in future seasons, such as maintaining and increasing the reach of networks of private providers as vaccinators and distributing more vaccine through public venues (e.g., schools). http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5912a2.htm

Interim Results: Influenza A (H1N1) 2009 Monovalent and Seasonal Influenza Vaccination Coverage Among Health-Care Personnel --- United States, August 2009--January 2010. *MMWR Weekly,* April 2, 2010 / 59(12);357-362. Since 1986, the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP) have recommended that all health-care personnel (HCP) be vaccinated annually for influenza (*1,2*). Since 1989, overall influenza vaccination coverage among HCP has never exceeded 49% in any season, according to estimates from the National Health Interview Survey (*3,4*). In August 2009, ACIP recommended that HCP be one of five initial target groups to receive the influenza A (H1N1) 2009 monovalent vaccine when it first became available (*5*). This report summarizes results of a population-based panel survey administered via the Internet during January 2010 to a nationally representative sample of 1,417 HCP to assess vaccination coverage. By mid-January 2010, estimated vaccination coverage among HCP was 37.1% for 2009 pandemic influenza A (H1N1) and 61.9% for seasonal influenza. Overall, 64.3% received either of these influenza vaccines, higher coverage than any previous season, but only 34.7% of HCP reported receiving both vaccines. The existence of an employer requirement for vaccination at the facility where the respondent was employed was associated with an eightfold greater likelihood of 2009 H1N1 vaccination compared with respondents employed by facilities with neither requirement nor recommendations; likewise, the existence of a recommendation for vaccination was associated with a fourfold greater probability of 2009 H1N1 vaccination. Health-care administrators should consider influenza vaccination coverage among employees an important measure of patient safety and make appropriate efforts to increase coverage in future seasons. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5912a1.htm

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Sadia Aslam, MPH
Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: SAslam@dhmh.state.md.us